

## Module 10

# Cattle Head Inspection

### Objectives

Upon completion of the cattle head inspection module the trainee will be able to:

1. Describe in writing the sanitary dressing requirements for a given slaughter procedure that occurs prior to or during the time the cattle head is being prepared for inspection.
2. List two basic requirements that must be met when the plant is collecting edible blood.
3. Describe in writing the sanitary method for removing the head from a carcass.
4. Describe in writing the usual method for identifying the head with the corresponding carcass.
5. Define in writing the following:
  - a. Weasand rod.
  - b. Dehorning device.
  - c. Defibrination.
  - d. Knocking box.
  - e. Dry landing area.
  - f. Head washing cabinet.
  - g. Sanitize.
6. List at least two examples of equipment that must be sanitized before/after use on each carcass.
7. List the four steps of cattle head inspection procedures (not required to be listed in any specific sequence).
8. List the lymph tissue that must be removed from all cattle heads that are to be identified as inspected and passed.
9. Describe in writing the disposition of cattle tongues with a palpable abscess such as cactus thorns or other foreign bodies.
10. List at least two abnormal conditions that may be detected during *each* of the four cattle head inspection steps.

11. List three dispositions the food inspector may make, once the cattle head has been inspected.
12. Given one example of an improper presentation at the cattle head inspection station, list the action the inspector should take when:
  - a. The improper presentation occurs infrequently.
  - b. The improper presentation occurs frequently.
13. When an abnormal condition is identified at the head inspection station, describe in writing:
  - a. The tags used for retaining the head and its corresponding carcass.
  - b. Who is responsible for attaching the retain tags.
  - c. The suggested method for identifying on the tags, the condition for which the carcass is being retained.
  - d. The section of the carcass on which the tags are to be attached when the condition is identified at the head station.

## Module 10

# Cattle Head Inspection

There are over 70 known diseases of animals that can be transmitted to man. Unsanitary slaughter and/or handling of carcass and meat products may allow harmful bacteria to grow on meat surfaces and potentially cause human illness. These and many more reasons were responsible for the passage of the Meat Inspection Act of June 30, 1906, by Congress. Basically, it provides for antemortem and postmortem examinations performed by the food inspectors throughout the country.

You are already familiar with the antemortem inspection procedures, so now the postmortem inspection procedures come to the front. Postmortem inspection is the basis for a determination made by the inspection force that a carcass is acceptable for human consumption.

The complete postmortem inspection procedures for cattle are fairly complex in nature; for that reason, this module will deal with cattle head inspection procedures exclusively.

There are several slaughter and dressing procedures that must be accomplished before the head is presented for inspection. This brings up the first of several points you should remember. The inspectors on the slaughter floor are responsible for monitoring these dressing procedures. What your area of responsibility is will depend on a number of variables. It should go without saying that if you are the *only* inspector assigned to a low-volume operation, *your* area of responsibility would be the entire plant. However, if you are assigned to a high-volume plant, where there are many inspectors working on the slaughter floor, *your area* of responsibility would be much smaller. The degree of importance, however, may be greater in the large plant, because of the speed of the operation, the vast amount of equipment, and the skill of the plant employees. Still another variable to consider is the location of your inspection station. You can see that the area of responsibility will vary from plant to plant. You must request your supervisor to point out to you what *your* area of responsibility encompasses.

As previously mentioned, the slaughtering of livestock is complicated. It has been said that the automobile assembly line set up by Henry Ford was an adaptation of what he saw in a slaughterhouse. In most plant sophisticated machinery is being used. It will be to your advantage to make yourself familiar with the operation to which you are assigned as soon as possible. Right now we're going to discuss several specific dressing procedures that occur prior to the head being presented for inspection.

Once antemortem inspection has been completed, the cattle are driven to the knocking area. Depending on the speed and size of the operation, one or several animals will be stunned at the same time. The knocking box, sometimes called the "chute", must be thoroughly cleaned before the start of each day's operation. Usually, this area has a roughened floor to help the animal maintain good footing. During the humane slaughter module, several methods for stunning were discussed, but briefly, let's review one specific method. When lead or frangible-type bullets are used to stun animals, there is almost always penetration to the brain, and many times to other parts of the head (such as head meat, cheeks, etc.) by bullets or other fragments. Therefore, if the plant uses the gunshot method to stun animals, the *only* part of the head which can be saved for edible purposes would be the tongue. No matter what method the plant uses to stun animals, IO must monitor the knocking area to assure the animals are being properly stunned.

The stunned animals will then fall into the dry landing area. Unless there is *not* other alternative, bleeding should not occur here. If bleeding must be done here, the area must be cleaned free of blood by squeegeeing or washing and squeegeeing after each animal. A safety fence should be present to prevent possible animal escape. The dry landing area must be kept as clean and dry as possible.

Once the animal falls into the dry landing area, almost immediately an employee will attach a chain to the hind leg and hoist the animal to the rail above. This procedure is called shackling. The shackle consists of a heavy chain attached to a trolley or roller, and is to be washed clean once each day.

Depending on the plant's method of skinning the carcass, the chain may be wrapped around both legs, or only one leg. Both legs are shackled together if the plant will skin the carcass on a cradle or bed. If the plant were skinning carcasses "on the rail," only one leg would be shackled, leaving one leg hanging free as a beginning point for the first leg skinner to start.

The shackling area must also be clean at the beginning of the day's operation, and kept as clean and dry as possible during the day. When the animal has been shackled and hoisted to the overhead rail, it is then moved to the bleeding area.

Bleeding is to be done as soon after stunning as possible to utilize post-stunning heart action to obtain complete bleeding. A curbed-in bleeding area may be used to collect blood. In some plants a blood collection tank is located below a metal grate-type floor that accommodates the butcher and allow the blood to drain through the grate into the tank. There are other methods used to collect the blood, but whatever method is being used, the collector must be positioned so that blood will not splash on stunned animals in the dry landing area or on

carcasses being skinned in the vicinity. Blood must be drained away or collected in a manner that will prevent accumulation of blood in the work area.

When monitoring the bleeding or sticking procedure, the inspector should observe the employee to determine if good sanitary techniques are being followed. The employee should be using a clean knife. The initial incision is made in such a way that the cutting action will draw any hair away from the cut surface rather than drag hair into the incision. When the employee is sticking an animal identified as a U.S. suspect, or an animal obviously contaminated, the knife should be sanitized before going to the next animal, and the employee's hands thoroughly washed.

Collecting blood for edible purposes is an entirely different situation and requires much closer monitoring by the inspector. To begin with, as hard as some of you may find it to believe, there *are* several food products manufactured from blood or that contain blood as an ingredient. This then brings up two specific requirements.

First of all, blood saved for edible purposes *must* be collected without contamination! An acceptable method is to place a funnel inside the skinned edges of the primary stick wound and against the carcass. The employee simultaneously severs the jugular vein and the carotid artery just above the funnel and allows the blood to drain into the collection container. The funnel and knife must be rinsed after each carcass and both must be sanitized after each identifiable lot.

This brings up a second requirement. Blood from condemned animal *cannot* be saved for edible purposes. Therefore *all* blood saved for edible purposes must be identified with its carcass until the carcass inspection has been completed. You may wonder how there could be enough containers sitting around to handle large volume kills, where 50-100 carcasses may separate the animal being bled and the one being inspected at the rail station. What usually is done is that the plant will collect blood from several carcasses into one container. This container will be identified with the same ID numbers that are attached to the carcasses. For example, the container will hold blood from 11 through 20, etc. Once all the animals have been inspected and passed in one lot, (e.g., lot 1-10), that container of blood is released and is usually emptied into a larger common container. However, if a carcass in a lot is condemned, *All* the blood in that lot would then be condemned. All containers are to be sanitized after being used.

Another factor to consider in saving blood for edible purposes deals with defibrination of the blood. The usual procedure is to use a mechanical device to stir or whip the blood to prevent coagulation. These metal beaters must be cleaned and sanitized after each lot of blood. In lieu of mechanical beaters,

approved anticoagulant chemicals may be used to prevent clotting. Using the hand to break up clots is prohibited. Defibrination is an option.

Beginning at or before the bleeding area, all carcasses must be spaced or separated to prevent cross-contamination of skinned carcasses and/or parts from unskinned carcasses. This spacing must be maintained through the last inspection period. Generally in the larger volume plants this requirement doesn't create a problem, since the carcasses are automatically spaced by the chain.

However, in those plants that use the "bed" skinning method, the carcasses are sometimes bunched together after bleeding. When this occurs, the inspector who has responsibility for monitoring the area must take action to prevent cross-contamination, i.e., requiring them to be physically separated with the feet of all carcasses pointed in the same direction.

Now that the animal has been bled and properly spaced, a company employee will start skinning the head. A clean knife should be used and the employee should wash his hands frequently. If the carcass is a U.S. suspect, or an obviously abnormal condition is involved, the head skinner must sanitize the knife and wash his hands before going on to the next carcass. The ears may also be removed at this time, depending on company policy. This is also the station where tags and/or other types of identification are placed together, usually in a plastic bag, and attached to the sternum region of the carcass.

When an animal has a large, obviously abnormal condition such as an abscess, the head will seldom be completely skinned. Generally that type head will be removed with the hide attached and placed in a special rack provided for that purpose to allow room for a special inspection.

After the head has been skinned and before it is removed from the carcass, it and the carcass must be identified by using duplicate numbered tags, which are to be securely attached by a company employee. The inspector should monitor this identification procedure several times daily, comparing the number attached to the head to the number on the carcass to ensure proper identification.

The next step in the dressing procedures may vary from plant to plant. In some plants the esophagus is rodded before the head is removed and in some at a later time. For the sake of continuity, let's discuss "rodding" the esophagus (or as it is sometimes called, the weasand) now. The term "rodding" comes from the implement used to separate the esophagus from the windpipe, which is called a rod. The weasand rod has a smooth looped end, which is positioned around the weasand.

Pushing the rod toward the internal viscera separates the tissue from the windpipe. The primary reason for this operation is to prevent contamination to edible tissue during evisceration; tying the end near its attachment at the throat also prevents the stomach contents from contaminating the head as it is being removed. There are specific requirements that must be checked by the inspector. One is that the rodding and tying of the weasand must be accomplished if the abdominal viscera is to be removed separately from the thoracic viscera. The other basic requirement concerns the rod itself. Because the rod is being inserted into the carcass where possible disease or contamination may be present and not yet visible, the rod must be sanitized after each carcass. The actual closing of the weasand may be done in any effective manner; however, the usual procedure is to tie the weasand with string.

When removing the head, care must be taken to prevent contamination to exposed tissue. The suggested method is to require the head be pulled away from the carcass and at the same time lifted up before the final separation cut is accomplished. As with the head skinning, the knife should be clean; and when a U.S. suspect or a contaminated head is being handled, the knife must be sanitized before being used on the next head. The head should not contact the floor. It is usually placed on a rack adjacent to the head washing cabinet.

FSIS requires the removal of horns from *all* heads that are going to be used for edible purposes. There are two basic requirements that you must monitor. One is that horn removal must be accomplished *before* the head is washed. Secondly, the implement used to remove the horns must be sanitized after being used on each head. From time to time the plant may elect not to save heads for edible use—for example, bull heads, for which more time and effort are required to extract the meat, and in management's opinion not worth the effort. There are many other reasons the plant might opt not to save the head. In any case IO still requires the head be inspected; however, the horn removal could be waived.

The last step of slaughter procedures before the head is presented for inspection is flushing and washing the head. There are several small details that *must* be accomplished and several problems that may occur. We'll cover all of them without implying any particular sequence of steps.

One of those details you should monitor is bad habit some employees get into—the storing of unwashed heads on the floor of the wash cabinet. This practice is forbidden.

The head is to be free of all horns and any pieces of hide before it is washed.

The cabinet should be designed to prevent water splashing on surrounding equipment or product.

Require a minimum of 50 F.C. of lighting at the head-washing hook. You should usually check this lighting during your pre-operational sanitation tour.

One last detail pertains to the sanitary condition of the hook used to suspend the head while it is being washed. This hook is to be rinsed clean between each head, and of course sanitized after it has held a U.S. suspect head or a head with an abnormal condition.

The nasal and oral cavities must be thoroughly flushed before the outer surface of the head is washed. The flushing attachment is inserted into the oral opening to remove all traces of contamination. In some plants a dual nozzle is utilized so that both nasal passages are flushed simultaneously.

The flushing and washing operation usually requires high water pressure to accomplish any adequate changing. Now the outer surface of the head is thoroughly washed and the head is ready for resent for inspection.

There are a number of ways to present the head for inspection. It would serve no useful purpose to cover them all, so we'll use two examples to give you some idea of the different methods used and to explain some specific requirements for the head inspection area.

In some plants the head is placed on a stationary head loop. This is usually designed to allow the head to be placed with the eyes pointing toward the floor. There must be a minimum of 50 F.C. lighting available at the lower point of the jawbone. These stationary head loops are to be rinsed after each head, and must be washed and sanitized after holding a U.S. retained head.

In some plants the head is placed on a continuous head chain. There must be 50 F.C. lighting at the lowest point on the head at the inspection station. These head hooks must be washed and sanitized after each use.

The most acceptable method of sanitizing is the installation of a cabinet along the chain, designed so the head hooks are carried through it. Inside the cabinet a continuous 180° F. water spray is provided to sanitize the hooks. To monitor the effectiveness of this sanitizing operation, FSIS requires the installation of an easily read, appropriately located thermometer that is capable of accurately measuring the water temperature inside the cabinet. The cabinet must also be constructed to contain the washing and sanitizing spray, and prevent the splashing of product or equipment in the general vicinity.

A clean head should now be presented for inspection. However, if the head is not clean, or if it is placed on the inspection hook or rack in a manner that diverts your attention from inspection, this constitutes an "improper presentation." You would delay inspection of the head until the problem is corrected. If a correction



can't be made prior to the head leaving the inspection area, stop the chain until the plant corrects the problem. Repeated stopping of the chain may require a meeting with plant management to determine a permanent solution to the problem.

If you have read the manual, or have had some on-the-job training, you probably have already picked up some of the lymph node terminology. Like everything else, time changes things, so therefore some lymph nodes are now going to be identified by different names. For some of you, it will cause extra work, but you need to start using the new terminology immediately.

This lesson will use the newest lymph node names during the description of each inspection procedure. To assist you, immediately following the new name of a lymph node, the old term will appear in parenthesis.

Part II.1(h)(I)(ii)(iii) of the MPI Manual indicates the steps of cattle head inspection procedures. As you review this section you will see that the sequence of inspection will depend on how the plant presents the tongue. Rather than covering all the various methods of presentation at this time, consider the fact that there are really four basic steps to follow when inspecting a cattle head.

The four basic steps are:

Step one-Observe the outer surface of the head and eyes.

Step two-Incise and observe the four pairs of lymph nodes identified as the mandibular, parotid, lateral retropharyngeal (atlantal) and medial retropharyngeal (suprapharyngeal).

Step three-Incise and observe the masticatory muscles (sometimes referred to as "cheek muscles"), and

Step four-Observe and palpate the tongue.

A four-section black retain tag is used for retaining heads and carcasses that exhibit abnormal conditions at the head inspection station.

The usual procedure for tagging is as follows. The inspector will attach one retain tag to the head and have it removed to the retaining area. The identification tag (house tag) is removed and used to identify its corresponding carcass. Usually the remaining three tags are attached to the lead side of the corresponding carcass, with one of those three tags to be transferred to the trailing side after the hide is removed. The extra tag will then be available to identify the viscera as retained. Thus, all parts are identified as retained for the veterinarian's final inspection and disposition.

Usually in the larger operations, where the head inspection station is located away from the viscera inspection station, a code system is used to indicate the reason for retaining the head and carcass.

This coding system consists of writing on the tag letters such as: "AC" (for actinbacillosis), "AB"(for abscess), "TB" (for tuberculosis), "EM" (for eosinophilic myositis), etc.

House tags must be checked from time to time to prevent inspection of viscera prior to the head being inspected. You would also check to be sure the house identification tags are being accurately applied, i.e., the same tag number on the head and its corresponding carcass.

A number of conditions may be detected at the head inspection station. The following section is meant as a review of each of the four steps of cattle head inspection procedures, and a description of some of the more common conditions that may be detected during each step. It is not intended to describe all conditions you will see or detect while performing cattle head inspection.

Once you have completed the inspection of the head, you will make one of the following decisions:

- A) Pass the head without restriction;
- B) Retain the head and carcass; or
- C) Condemn the head.

### ***Step One: Observe Head's Surfaces and Eyes***

During your observation of the head's outer surface and eyes you may detect contamination in the form of:

Pieces of hide still attached

Hair

Ear tubes not removed

Dirt

Rust

Grease

When these or any other contaminants are present on the head when it is presented for inspection, you will delay inspection until the condition is removed by a company employee.

In addition to observing the head for contamination, you must also be alert to detect abnormal conditions. Keep in mind that the following list of abnormal

conditions describes those most commonly seen during this phase of inspection. Chances are you will see others.

### ***Epithelioma***

Epithelioma (cancer eye) (bug eye) is the most common neoplasm of cattle. All breeds are susceptible, but Herefords are by far the most commonly affected. It is felt the tumor originates in either the cornea, third eyelid, or the eyelids, and usually progresses to the surrounding bone and adjacent region. The obvious lesions will have been detected on antemortem inspection, and the animals will be handled as suspects. Quite often the employee skinning heads will not even skin the head with the obvious condition because of the potential for contamination.

It is the less obvious lesion you must be alert for. The lesion may appear as a small growth on the cornea or eyelid. There may be no lesion at all! In some cases the eye may have been surgically removed prior to slaughter. You would retain all heads and their corresponding carcasses when they exhibit any of these signs.

### ***Actinomycosis***

Actinomycosis (acti) (lumpy jaw) is generally located in the bony structures of the head and jaws. It may be abscessed and is usually characterized by swelling. When the condition is localized, the head is usually condemned; however, until you have received on-the-job training by your veterinarian, it would be wise to retain the head. The corresponding carcass will be retained, pending further inspection.

### ***Actinobacillosis***

Actinobacillosis (acti) (wooden tongue) is generally located in the soft tissue of the head, such as the tongue and/or lymph nodes. The condition is frequently mistaken for an abscess and, if localized, part of the head may be salvaged after the removal of affected tissue. You, the new inspector, should retain the head and corresponding carcass until you have had adequate experience in determining the extent of the condition. In some cases this condition may be found in the viscera and lungs of the animal, so be sure the carcass is retained until after all inspection has been completed.

### ***Abscesses***

Abscesses are encountered in many locations throughout the carcass and its viscera. It may have occurred because of another condition, such as actinomycosis/actinobacillosis, etc., or it may be the result of an injury or foreign

bodies such as splinters, thistles, etc. The abscesses are generally localized, but you should retain the head and carcass until completion of all inspection.

***Step Two: Incise and Observe the Four Pairs of Lymph Nodes.***

It goes without saying that a clean, sharp knife will make this phase of inspection much easier and faster, and allow you more time to observe each exposed surface.

Remember to slice each nodes as thinly as possible, as many times as possible, using a wrist rolling action. And remember to sanitize your knife each time it becomes contaminated, the same as you would expect of the company employee.

The four pairs of lymph nodes to be inspected are the:

Mandibular

Parotid

Medial retropharyngeal (suprapharyngeal)

Lateral retropharyngeal (atlantal)

*Note: One or both of the lateral retropharyngeal (atlantal) lymph nodes may be missing at the time of head inspection. This may occur because of the method of head removal. If these nodes are on the head they will probably be located in the carcass neck. This is one of the primary reasons a carcass is tagged as retained, even though the condition detected in the head is localized.*

During this phase of cattle head inspection the following abnormal conditions are common, or at least important enough to warrant a brief description.

**Tuberculosis (T.B.)**

One of the primary reasons you incise lymph nodes is to detect TB. The affected lymph node involvement will vary from slightly involved to totally involved. When incised, the node affected usually exhibits a yellowish semi-liquid to caseous (cheese-like) mass of tissue interspersed with some normal tissue, greyish in color, and often showing signs of inflammation.

When you detect what you suspect is TB, you must retain the head and corresponding carcass, since it is common to find lymph node involvement in the lungs and other visceral organs.

This brings up another important consideration dealing with areas of responsibility. All man-made identification devices must be maintained with the carcass during the dressing procedures, throughout the final inspection station.

It is vitally important that the affected animal can be traced back to the herd of the origin, in an effort to eradicate TB from the United States cattle herds.

The method most often used to maintain identification, such as ear tags, back tags, sale barn tags, etc., is to have a designated company employee near the head skinning station remove all forms of ID, place them into a plastic bag, and attach the plastic bag to the carcass. You should monitor this procedure periodically to determine if the method used by the plant is adequate. Another source of identification is the brand on the hide. You should, if possible, retain the hide from TB-affected animals to help gain information about the herd of origin.

### ***Actinobacillosis***

As previously mentioned, it affects the soft tissue and frequently the lymph nodes. When an affected node is incised, thick greenish-yellow pus is usually present. The head and carcass are to be retained.

### ***Epithelioma***

Also previously mentioned, and since the parotid lymph nodes drain the orbital region, they will usually be the first nodes involved. The incised node is usually enlarged and of neoplastic or tumorous consistency. Head and carcass are to be retained.

### ***Abscess***

An abscess can be found in any tissue and is frequently in or near a lymph node. The abscess is usually encapsulated, and may be "under pressure". If you cut into this type abscess it will usually squirt or purge contamination over the head and sometimes nearby product. The head and carcass should be retained pending a closer inspection by the viscera and rail inspectors.

A company employee will cut the hyoid bone to remove the tongue. You would not require this implement be sanitized unless the head is retained.

The tongue is then cut loose from its attachments. If the lymph nodes were inspected prior to the tongue being dropped, the tongue is usually left attached to the head by its anterior attachments to the jaw until the cheek muscles are incised. However, in some plant operations the tongue is removed from the head and hung on a hook adjacent to its head to allow for head inspection to be accomplished in one operation.

Either method requires that a plant employee remove the tonsils, and failure to do so is considered an improper presentation.

***Step Three: Incise and Observe Lateral and Medial Masticatory Muscles (cheeks)***

*Note: (after tongue dropping)*

The technique used to incise the cheek muscles will vary from inspector to inspector, but basically you would insert your hook into the cheek muscle somewhere in the upper one-third of the muscle near the attachment. Applying a slight pressure with the hook, you should use your knife to separate the cheek without exposing the connective tissue. You would pull toward the left shoulder with the hook when incising the left cheek and vice-versa when incising the right cheek. You should become comfortable with a little practice and be able to direct your attention more to observing the exposed surface of the cheek muscle than to your knife and hook.

Some of the abnormal conditions you might observe during cheek slicing would include the following:

***Cysticercosis (Measles, tapeworm, cyst, etc.)***

The cyst is found chiefly in the muscles of the jaw heart, and diaphragm. However, it may be found in other muscle tissue as well. A live cyst has the appearance of a pearl or fluid-filled sac. The cysticerci may die shortly after development and the lesion may calcify. A calcified lesion (dead cyst) is usually yellowish in color and when incised by the knife will sometimes give you the feeling that you have cut through some granular material. Since the bovine animal is only the intermediate host for this parasite, while the human is the definitive host, you must always retain the head and carcass when a cyst is found, dead or alive. The veterinarian will perform a special expanded inspection procedure to determine the ultimate disposition of the carcass.

***Eosinophilic Myositis ("EM")***

EM lesions are most frequently detected (by observation) in the muscles of the cheeks, in the tongue, in the heart, and in the esophagus. They may invade other skeletal muscle tissue as well. The most common lesions are small, irregularly distributed, yellowish-green, yellowish, or greyish-white pin-head shaped spots. They may also appear as larger bright green to greenish-grey areas that vary in size from that of a dime to the size of the palm of the hand.

Since the condition may also be found in other sections of the carcass, you should retain the head and carcass for a final disposition by the veterinarian.

***Bruised Tissue***

Depending on the degree of bruised tissue, you will determine if the head should be condemned or trimmed by a company employee. You would not normally retain the carcass because of bruised tissue on the head.

***Steatosis***

This muscular condition principally affects cattle in feedlots and is characterized by a replacement of the muscle fibers by fat tissue. There is not inflammation involved. It usually occurs in the heavier muscles of the back and shoulders. It is seen frequently enough at the head inspection station to be mentioned, however. The condition does not affect the carcass in any other way, so after removal of the affected area, the carcass is passed for food.

***Xanthosis (Brown atrophy of the musculature)***

This brownish discoloration of the skeletal and heart muscles is the result of excessive quantities of waste pigment being deposited in the muscles. Xanthosis is usually found in older cattle and those cattle suffering from chronic wasting disease. The masseter muscle, tongue, and heart are most often affected.

When there is extensive discoloration of the musculature of the carcass, it is unfit for food. When the condition is slight and localized, the carcass is passed for food after the localized condition has been removed by trimming. If you have any doubt about how extensive the condition is, you should retain the head and carcass for the veterinarian's disposition.

***Step Four: Observe and Palpate Tongue***

Occasionally there will be hair sores, tonsils, ulcers, and scar tissue on the surface of the tongue. These conditions are to be removed under your supervision by a company employee.

***Actinobacillosis (Wooden Tongue)***

As previously discussed, this condition affects soft tissue and frequently it localizes in the tongue. At the site of the infection a tumorous mass develops, and later a softening of the interior of the mass occurs with a formation of thick pus. The tongue is usually distorted from its normal shape and frequently exhibits a tough fibrous consistency--hence the name wooden tongue.

Because actinobacillosis does sometimes progress into the visceral organs and other areas of the carcass, you should retain the head, tongue, and carcass until the viscera and rail inspection procedures are completed.

### ***Cactus Thorns***

Cattle tongues with palpable foreign bodies and/or foreign body abscesses shall be condemned. This then means a tongue with palpable cactus thorns must be condemned. (Part 11.5(l)(4) and 11.11(e) of Manual)

Upon detecting any abnormality, you should retain the head and its corresponding carcass. You will apply the retain tags as previously discussed. Remember:

1. It is your responsibility to retain the head and carcass. You may direct a company employee to attach the retain tags, or remove the head and/or carcass to the final inspection area, but remember that you are responsible for seeing that the correct head and carcass are tagged.
2. Do not trim, or have trimmed, any condition that may have a direct bearing on the veterinary disposition. You will gain experience on the job and learn when to have a localized condition trimmed and when not to, but until you have the knowledge and confidence to do this with accuracy, you should retain all abnormalities for your supervisor's disposition.



## Module 10

# Cattle Head Inspection

### Supplement

Circle the letter preceding the statement you feel best answers each question.

1. Which of the following conditions is most likely to be detected by observation (without slicing or palpation) of the head?
  - a. Epithelioma (cancer eye).
  - b. Tuberculosis (TB).
  - c. Eosinophilic myositis (EM).
  - d. Cysticercosis (tapeworm).
2. In which of the following head tissues are lesions of eosinophilic myositis (EM) usually found?
  - a. Eye and orbital tissue.
  - b. Masseter (cheek) muscles.
  - c. Skin and tonsils.
  - d. Lymph nodes.
3. Which of the following statements best describes the usual action taken by the head inspector upon detection of abnormal conditions that might be associated with a disease condition?
  - a. Condemns the head.
  - b. Asks plant employee to identify the proper carcass for the carcass inspector's special attention.
  - c. Assures that the head and corresponding carcass are identified with retain tags and held for veterinary disposition.
4. Which of the following is required to be removed after the tongue is dropped?
  - a. Lymph nodes of cheeks.
  - b. Ear tubes.
  - c. Tonsils.
  - d. Papilla of the tongue.

5. Which of the following is included as part of the normal palpation procedure on cattle head inspection?
  - a. Tonsils.
  - b. Tongue.
  - c. Masseter (cheek) muscle.
  - d. Mandibular bone.
6. The "measles" found in cattle are in reality:
  - a. Lesions of grub infestation.
  - b. Lesions of tuberculosis in muscle tissue.
  - c. Tapeworm cyst in muscle tissue.
  - d. Lesions of eosinophilic myositis.
7. Which of the following reasons for conducting a cattle head inspection is considered the most important?
  - a. It permits meats from the head to be used for humane consumption.
  - b. It helps the carcass inspector to know what conditions to look for.
  - c. It helps to determine compliance with humane slaughter requirements.
  - d. It is the first postmortem opportunity to detect disease conditions.
8. Which statement best describes the usual distribution of the four small retain tags?
  - a. One for the head, one for the carcass.
  - b. One for the head, one for the carcass, one for the viscera, one for the veterinarian.
  - c. One for the head, one for the carcass, one for the viscera, one for the kill floor foreman.
  - d. One for the head, two for the carcass, one for the viscera.
9. During cattle head inspection, actinobacillosis is sometimes found in the lymph nodes. Where else can actinobacillosis be found during cattle head inspection?
  - a. Paunch.
  - b. Tongue.
  - c. Eye.
  - d. Teeth.

10. When blood is collected for edible purposes it must be:

- a. Sanitized before use as edible product.
- b. Identified with the carcass until that carcass is inspected and passed.
- c. Defibrinated immediately after collection.
- d. Maintained at a temperature of 36° F or below.

Matching - Part I (There may be more than one appropriate response)

- |   |   |
|---|---|
| 1. _____ Stunned with lead or frangible bullets             | A. Clean and dry as possible  |
| 2. _____ Dry landing area shall be kept                     | B. Designated area  |
| 3. _____ Bleeding shall be                                  | C. Accomplished as soon after stunning as possible                            |
| 4. _____ An acceptable method of collecting edible blood is | D. Head (except tongue) condemned   |
| 5. _____ Blood clotting may be prevented with               | E. Approved anticoagulants or mechanical defibrination                        |
| 6. _____ Carcass separated or positioned                    | F. Head pulled up and out   |
| 7. _____ Proper severing of head from carcass               | G. To prevent contamination   |
| 8. _____ Area which inspector is responsible                | H. Placement of funnel inside skin, edges of stick wound and against carcass. |

Matching - Part II

- |   |   |
|---|---|
| 1. _____ Rodding of weasand is required when                    | A. Head washing cabinet   |
| 2. _____ Identically numbered company tags                      | B. Maintain identity of carcass and parts   |
| 3. _____ Equipment used to de-horn or used on suspected animals | C. Flushing of both nasal and oral passages   |
| 4. _____ Heads must not be stored on or contact floor of        | D. Must be sanitized between each carcass   |
| 5. _____ Proper flushing of head requires                       | E. 180 degrees F  |
| 6. _____ Minimum sanitizing temperature of head hook            | F. Head washing cabinet at level of head hook   |
| 7. _____ 50 FC of light required                                | G. Eyelashes, tonsils, ulcers (hair sores), contamination, bruises, lacerations                       |
| 8. _____ Removed by establishment employee                      | H. Abdominal viscera are removed separately from the thoracic viscera                                 |
|   | I. Head rack- all areas of head to symphysis of mandible. Head chain- lowest inspection point on head |

### Part III

#### 1. Cattle Head Inspection Procedures

- A. List the four basic steps of cattle head inspection in sequence as identified in Part II.1(h)(1)(i)

(1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

(4) \_\_\_\_\_

#### 2. Observation of the head

- A. List four instances of improper presentation.

a. \_\_\_\_\_ c. \_\_\_\_\_

b. \_\_\_\_\_ d. \_\_\_\_\_

- B. List two pathological or abnormal conditions that may be detected when observing the head.

a. \_\_\_\_\_ b. \_\_\_\_\_

- C. Supply information as indicated.

- a. Epithelioma

(1) Usual site of lesions \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

(3) Breed most commonly affected \_\_\_\_\_

b. Actinomycosis

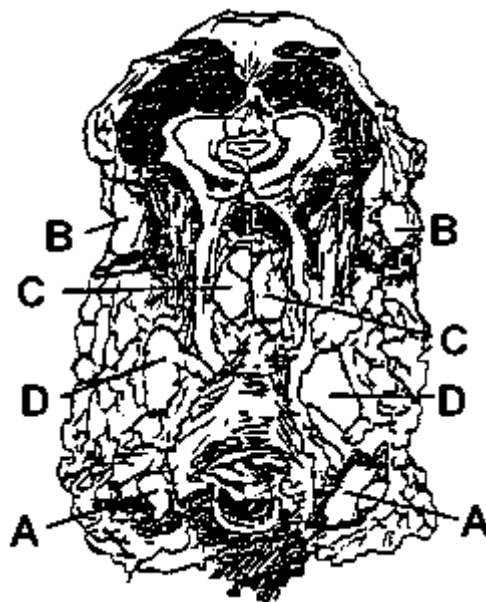
(1) Usual site of infection \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

Use the illustration below to answer the following question.



3. Incision and observation of the head's lymph nodes.

A. From the illustration, list the names of the lymph nodes as indicated by the letters (using latest terminology):

a. c.

b. d.

B. Name four pathological or abnormal conditions that may be detected when incising the lymph nodes of the head.

- |    |    |
|----|----|
| a. | c. |
| b. | d. |

C. Supply information as indicated.

a. Actinobacillosis

(1) Usual site of infection \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

b. Tuberculosis

(1) Usual site of infection \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

c. Neoplasm (malignant lymphoma)

(1) Usual site of lesions \_\_\_\_\_

(2) Appearance of lymph nodes \_\_\_\_\_

\_\_\_\_\_

4. Incision and observation of the masseter (cheek) muscles

A. Name four pathological or abnormal conditions that may be detected when incising the masseter muscles.

- |    |    |
|----|----|
| a. | c. |
| b. | d. |

B. Supply information as indicated

a. Cysticercosis

(1) Name the areas of affected portion this condition may be detected.

\_\_\_\_\_

(2) Appearance (live cyst) \_\_\_\_\_

\_\_\_\_\_

(3) Appearance (degenerated cyst) \_\_\_\_\_

\_\_\_\_\_

b. Eosinophilic Myositis

(1) Tissues affected \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

c. Steatosis

(1) Tissue affected \_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_



## d. Xanthosis

(1) Tissue affected \_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

## 5. Observation and palpation of the tongue

A. Name four pathological or abnormal conditions that may be detected when inspecting the tongue.

a.

c.

b.

d.

B. Supply information as indicated.

a. Wooden tongue (actinobacillosis)

(1) Tissues affected \_\_\_\_\_

\_\_\_\_\_

(2) Appearance \_\_\_\_\_

\_\_\_\_\_

b. Foreign body abscesses (cactus thorn)

(1) Appearance \_\_\_\_\_

\_\_\_\_\_

(2) Inspector's disposition \_\_\_\_\_